Integration Panel
Summary of Recommended 1997 Category III Funding Package

The CALFED Bay-Delta Program convened a panel of 20 technical experts, called the Integration Panel (Attachment A), to provide advice on near-term ecosystem restoration efforts related to the Bay- Delta System. Specifically, the Integration Panel was given three tasks:

- Select proposals for the 1997 Category III RFP (up to $60 million)
- Identify other high priority proposals (up to $40 million)
- Review and comment on the CVPIA FY 98 Annual Work Plans

This report provides a general summary (not project- specific) of the Integration Panel's recommendations for the 1997 Category III proposals. Due to legal requirements of confidentiality, proposal specific information is not available until the final selection is made.

The Panel was given a limit of $60 million by CALFED staff for the 1997 Category III proposals. The limit was set at the $60 million level rather than the $70 million identified in the RFP because of the need to reserve funding for administration, contingencies and possibly for gaps identified by the Integration Panel. The second task given to the Integration Panel was to identify other high priority proposals that would be selected if additional funding were provided. The Integration Panel identified approximately $30 million in additional high priority proposals or additional high priority actions that need to be funded to address gaps. The Panel will meet again in November to refine and possibly add to the $30 million package. Funding for the other high priority proposals and actions would most likely be provided by federal funds. The last task, related to the CVPIA, provided a basis for coordinating the ecosystem restoration actions between the Category III and CVPIA programs. A memo describing the Panel CVPIA recommendations and comments will be provided to the USFWS, USBR, Ecosystem Roundtable and Restoration Fund Roundtable.

1. Summary of Category III Evaluation and Selection Process

The CALFED Bay-Delta Program established a two step process to evaluate and select the 1997 Category III proposals. Thirteen technical review panels, organized by subject, scored and evaluated each of the 332 proposals over a three week period. The Technical Review Panel evaluation sheets were passed onto the Integration Panel for proposals with a score of 40 or higher. The role of the Integration Panel was to select the highest priority proposals based on the benefits to the RFP priority species and habitats.

2. Integration Panel Process

Prior to reviewing the proposals, and to guide the selection of proposals, the Integration Panel developed Guiding Principles (Attachment B) which emphasized restoration of ecosystem processes, multiple benefits to species and habitats and other general principles, consistent with the RFP. In addition, the Panel further refined the priorities for the species and project types identified in the RFP (Attachment C). The Panel included the CVPIA anadromous fish species in their list of species priorities to help them review and comment on the CVPIA Annual Work plans. To identify the level of benefit that would be provided by addressing the stressors, the Integration Panel also ranked each of the stressor groups for each of the species (Attachment D). The RFP definitions for each stressor are provided in Attachment E. In general, based on those guiding principles, the species, stressor and project-type priorities, and the technical review panel information, proposals with a passing technical score were selected and gaps identified.

The Integration Panel met for four days to review and select proposals. The Panel was facilitated by a CALFED consultant and notes taken by CALFED staff. The Panel was observed by a staff person from the Attorney General's Office for one of the mornings at the request of the Ecosystem Roundtable to help monitor the process. Throughout the four days the panel focused on the technical and biological merits of each proposal and all members had an equal voice in the decisions. If a member was closely associated with a proposal, that panel member did not participate in the voting on that proposal.

3. Summary of Category III Recommended Package

The Integration Panel recommends funding for 51 proposals at a cost of $60,653,499. A total of 332 proposals were reviewed by the Technical Review Panels and approximately 150 proposals were forwarded to the Integration Panel with a passing score of 40 or more as directed by the RFP.

Many good proposals were received in response to the Category III RFP. There are a variety of reasons that proposals were not forwarded on to the Integration Panel by the Technical Panels, or not recommended for funding by the Integration Panel. Generally, the reasons proposals were not recommended include:

- The limitation of available funding;
- The primary benefits were not significantly related to the priority species in the RFP;
- The proposal did not address conflicts that are manifest in the Bay-Delta problem area;
- The proposal needed to be revised to better address the Category III and CALFED priorities.

As the Technical Review Panels and the Integration Panel reviewed and selected the proposals, the panels identified gaps that need to be addressed in future funding cycles. Those gaps are described in more detail in the next section as the topic is discussed. However, in general the primary gaps identified by the Integration Panel were:

- Water quality guidance document needed to identify and coordinate priority actions to maximize ecosystem benefits
- Landscape level monitoring, reporting, and assessment proposals for the CALFED near-term ecosystem restoration efforts;
- Research to better understand the life history of green sturgeon and steelhead
- Projects on the Feather, Yuba, American and Merced Rivers

4. Recommended Proposals Summary

The following sections provide a general summary of the Integration Panel's recommended proposals, with breakdowns by stressor, project type, applicant type, habitat type, species group, and geographic area.

A. Stressor Groups

The Integration Panel used the following stressor groups identified in the RFP to evaluate and recommend proposals (Table A). Attachment D provides information in the Integration Panel ranking for each stressor.

Table A. Summary of Proposals Recommended for Funding

Stressor Groups	Dollar Amount	%
Hydrograph Alterations	$0	0%
Entrainment	$6,376,766	11%
Barriers and Straying	$705,201	1%
Floodplain/Marshplain changes	$21,859,605	36%
Channel Form Changes	$24,839,783	41%
Water Quality	$5,081,260	8%
Water Temperature	$53,113	0%
Undesirable Species Interactions	$1,155,900	2%
Adverse Harvest Impacts	$0	0%
Population Management/Artificial Propagation	$581,873	1%
Land Use	$0	0%
Human Disturbance	$0	0%
Wildfire	$0	0%
Totals by stressor group	***$60,653,499***	100%

Hydrograph Alterations. The Integration Panel considered flow changes to be a high priority stressor for most species. However, because Category III funds are not available for water acquisition projects, and because there were few proposals that dealt specifically with other

aspects of this stressor, no Category III funding was recommended. However, CVPIA funding is available to fill a portion of this need.

Entrainment. The Integration Panel considered entrainment to be a high priority for action for virtually all priority fish species. The Integration Panel recommended approximately $6 million to fund fish screens, which provides funds for planning and construction in the Sacramento Valley, San Joaquin Valley, and Delta. The Integration Panel recommended funding for screening proposals which provided maximum benefits to the greatest number of species or runs. In addition, screens in some areas are expected to provide greater benefits than others. For example, Suisun Marsh entrainment was not considered of highest concern as other geographical areas due to the funding previously provided to address many of the larger diversions in the Marsh. In addition, not all geographical areas or potentially significant diversions had screening proposals in the current funding cycle. The Technical Panel identified a need for coordination and guidance for small fish screening projects.

Barriers and Straying. Relatively few proposals were received that specifically addressed barriers or straying. However, one proposal that would facilitate greater use of a tributary stream for spawning and rearing was recommended for funding.

Floodplain, Marshplain, and Channel Form Changes. Many of the proposals that addressed either floodplain/marshplain changes or channel form changes actually addressed both stressors. The Integration Panel considered these stressors a high priority for all salmonid and several other priority species. Approximately $47 million (77%) of the recommended funding addresses these stressors. Proposals that address this stressor tend to use an ecosystem approach, and did not typically have a species specific orientation. These types of proposals require higher levels of funding than other proposals due to large land acquisition, earth moving, and/or habitat restoration costs.

Water Quality. The Integration Panel recommended proposals that address water quality concerns in the Sacramento mainstem, San Joaquin mainstem, and Delta. The panel considered this stressor to be of moderate priority for most species for the near-term, and noted that specific benefits were not readily quantifiable. The panel indicated that the significance of potential negative effects at the population level is not well understood, and requires more research. Among the various water quality issues, the Integration Panel prioritized pesticides as #1, selenium as #2, and mercury as #3 as they relate to fisheries impacts to the priority species from the RFP. Water quality proposals recommended for funding provide benefits for all species. Agricultural and urban runoff was identified as the primary source of water quality concerns, rather than mine waste runoff, particularly since runoff from Spring Creek at Iron Mountain Mine is already being addressed.

The Integration Panel identified a need for a workgroup of specialists to develop a water quality guidance document which identifies the key issues for water quality related research and implementation that are most relevant to CALFED's ecosystem restoration efforts. In general, the panel identified a need for a more coordinated approach to monitoring, assessment, and

public outreach regarding agricultural and urban water quality issues. A specific need was identified for water quality studies regarding toxics in Suisun Bay sediments.

Water Temperature. No proposals were forwarded to the Integration panel that specifically addressed water temperature effects, although proposals that address Shaded Riverine Aquatic habitat had secondary benefits for water temperature. The funding shown in Table A is a result of secondary benefits for water temperature. The Integration Panel considered water temperature problems a lower priority stressor for most species and runs. Water temperature was considered a low priority for winter-run chinook salmon, primarily because construction of the Shasta Water Temperature Curtain has been completed. Water temperature was of greater concern in the San Joaquin system than in other areas.

Undesirable Species Interactions. The Integration Panel considered undesirable species interactions (primarily predation, but also competition) to be a relatively low priority stressor for most of the priority species (partly due to a lack of effective control measures). During this funding cycle, undesirable species interactions were of moderate concern for Delta smelt and San Joaquin fall run salmon. Although nine proposals related to undesirable species interactions were forwarded to the Integration Panel, only one was recommended for funding. Several proposals that primarily addressed other stressors, however, had secondary benefits related to undesirable species interactions and therefore the recommended funding package includes $1,155,900 attributed to this stressor (Table A).

The Panel identified a gap related to funding for introduced species in the Delta. The Integration Panel generally believed that a proposal was needed related to education and stakeholder coordination regarding introduced species in the Delta. Also, they noted that concerns are broader than just control of ballast water introductions, the focus of several proposals.

Adverse Harvest Impacts. The Integration Panel considered adverse harvest impacts to be a stressor of moderate importance to some of the priority species. There were relatively few proposals received that addressed this stressor, and none of them were forwarded from the Technical Panels to the Integration Panel. Although no funding for this stressor is recommended in this funding cycle, the Integration Panel noted that this was a gap that should be addressed in future funding cycles.

Population Management/Artificial Propagation. These two stressors were grouped by the Integration Panel due to the considerable overlap in the types of issues they were addressing. The Integration Panel ranked this stressor as being of moderate to high importance to the salmonid species. Of ten proposals received related to this stressor, seven were forwarded to the Integration Panel and two were recommended for $581,873 in funding. These recommended proposals relate to genetic and fish culture research issues that have relatively broad application for restoration of selected first tier priority species.

Land Use. The Integration Panel considered land use to be a stressor of low to moderate importance for most of the priority species. Because land use stressors are typically manifested

as water quality (pesticide runoff, sedimentation, etc.) or channel form (sediment input, gravel recruitment, etc.) problems, land use was not addressed as a separate category when summarizing recommended proposals or allocation of funds.

Human Disturbance and Wildfire. Human disturbance and wildfire were considered low priority stressors for the species of interest. Only one proposal related to these stressors was forwarded to the Integration Panel, and no funding was recommended.

B. Project Types

The Integration Panel prioritized the types of proposed projects within the guidelines of the RFP (Table B). The project types listed in the RFP were summarized into six categories: Implementation (including construction, land acquisition, and aquatic and terrestrial habitat restoration), Planning (including watershed management and planning), Monitoring (including water quality), Research, Education, and Operations and Maintenance (O&M). Individual proposals frequently included components of several project types (e.g., a fish screen would be an implementation project, but may also have a planning and monitoring and O&M component), but they are categorized by the project type which is the largest component of the proposal.

Table B. Summary of Proposals Recommended for Funding

Project Type	Dollar Amount	%
Implementation	$52,161,303	86%
Planning	$3,006,915	5%
Monitoring	$3,335,408	5%
Research	$1,980,873	3%
Education	$169,000	0%
O&M *	$0	0%
Totals by Project Type	***$60,653,499***	100%

* No proposals received for only O&M cost, but several acquisition proposals had associated O&M costs totalling approximately $900,000.

Implementation projects were given the highest priority because they can directly produce biological benefits to the species or habitats of interest. The implementation project category can include educational projects that produce direct biological benefits, pilot programs and demonstration projects, and project specific monitoring. The recommended funding package allocates approximately $52 million (86%) to implementation projects. Approximately $34.5 million of this is related to land acquisition (15,500 acres).

Planning projects were given the next highest priority, and included items such as feasibility studies, watershed planning, and environmental documentation efforts. Planning projects are

recommended for approximately $3 million (5%) in funding during this cycle. Of the $3 million, approximately $1.2 million is related to watershed planning and management.

Monitoring projects at the landscape level (as opposed to project specific monitoring that is included under implementation projects) are the third level priority. Landscape level monitoring is recommended for approximately $3 million (5%) in funding during this cycle.

Lower priority project types, per the RFP, included research, education, and O&M. Research proposals were considered if they were focussed, addressed questions of scientific uncertainty, and could lead to resolution of issues that would facilitate future project implementation. Research projects are recommended for approximately $2 million (3%) in funding during this cycle.

Education proposals were emphasized where they are focussed on changing behavior to reduce a stressor in the system, as opposed to in-classroom activities. Of the 14 education proposals received, 8 were forwarded to the Integration Panel and 2 were recommended for funding. These projects total approximately $169,000 (<1% of the current funding package).

Operations and maintenance proposals were considered the lowest priority for funding, although short term O&M was considered a higher priority than long term. Although no proposals were primarily O&M proposals, several acquisition proposals included O&M costs.

C. Applicant Types

The Integration Panel's recommended funding package includes approximately $21 million (35%) in awards to Federal government applicants, a large portion of which is related to land acquisitions (Table C). Public/non-profit joint ventures are recommended for $16 million (26%) in funding, which also includes significant expenditures for land acquisition. The total acreage of land acquisition by federal, or public/non-profit joint ventures was approximately 15,300 acres. Local governments or special districts are recommended to receive approximately $13 million (21%) in funding, a large portion of which is associated with construction costs for fish screens/ladders and channel or floodplain modifications. Recommendations for State government proposals totaled $4 million (6%). Universities are recommended for $3 million (4%), non-profit groups for $2.4 million (4%), and private groups are recommended for $2 million (3%).

Table C. Summary of Proposals Recommended for Funding

Applicant Type	Dollar Amount	%
Federal	$21,033,010	35%
State	$3,908,652	6%
Local Government/Districts	$12,817,205	21%
University	$2,623,396	4%
Private	$1,877,251	3%
Non-profit	$2,435,200	4%
Public/Non-profit Joint Ventures	$15,958,785	26%
Totals by Applicant Type	***$60,653,499***	100%

D. Habitat Types

The Integration Panel recommended funding for each of the priority habitat types listed in the RFP (Table D). The largest amount of funding was recommended for instream aquatic (37%), shaded riverine (28%), and seasonal wetland habitats (19%). Smaller amounts were recommended for tidal perennial freshwater marsh, saline marsh, midchannel islands and shoals, and North Delta ag wetlands and perennial grasslands. These recommended funding allocations result from an emphasis on addressing floodplain/marshplain change, channel form change, and entrainment stressors, since these stressors typically affect instream aquatic, SRA, and wetland habitat types.

Table D. Summary of Proposals Recommended for Funding

Habitat Types	Dollar Amount	%
Tidal perennial freshwater marsh	$5,978,695	10%
Seasonal wetland and aquatic	$11,735,583	19%
Instream aquatic	$22,494,563	37%
Shaded riverine aquatic	$17,169,771	28%
Tidal saline marsh	$1,511,800	2%
Midchannel islands and shoals	$653,254	1%
North Delta ag wetlands and perennial grasslands	$622,830	1%
Other habitats	$0	0%
N/A	$487,003	1%
Totals by habitat type	***$60,653,499***	100%

E. Species Groups

The Integration Panel recommended funding for each of the priority species listed in the RFP, including primary first tier species (San Joaquin fall run, winter run, spring run, late fall run, steelhead, delta smelt, and green sturgeon), primary second tier species (longfin smelt and splittail), and secondary species (migratory birds and striped bass). The recommended proposals reflect the Integration Panel's guiding principle to "emphasize proposals which address... multiple benefits to species, habitats, or processes upon which these species depend."

Allocation of funds among species was summarized in two different ways. Allocation by primary species was based on the species expected to gain the greatest benefit from the project (Table E-1). In the case of benefits to multiple salmon runs in the same river (i.e., Sacramento mainstem), winter run were designated the primary species. Using this summary method, winter run and San Joaquin fall run are the major species recommended for funding.

Benefits to multiple species were also summarized by allocating a percentage of the proposal benefits (and recommended funding) to each of the species affected (Table E-2). This summary reflects an estimate of the proportional benefits among species. Using this method, most of the Sacramento River salmonid runs and species are recommended for approximately equal levels of funding. The San Joaquin fall run recommendation is for a higher level of funding, which is a result of it being the only salmon run in the San Joaquin system. Migratory birds, as a single species group, receive the highest proportion of recommended funding because they benefit from nearly all wetland, marshland, and SRA projects, and the species group is not subdivided into smaller categories like the salmon species are.

Table E-1. Summary of Proposals Recommended for Funding

Primary species benefits	Dollar Amount	%
San Joaquin fall run Chinook Salmon	$19,812,787	33%
Late fall run Chinook Salmon	$0	0%
Winter run Chinook Salmon	$17,067,250	28%
Spring run Chinook Salmon	$1,099,313	2%
Steelhead	$1,503,371	2%
Splittail	$5,374,300	9%
Delta smelt	$1,027,370	2%
Longfin smelt	$0	0%
Green sturgeon	$0	0%
Migratory birds	$617,000	1%
Striped bass	$0	0%
Total by primary species	***$60,653,499***	100%

Table E-2. Summary of Proposals Recommended for Funding

Distributed species benefits	Dollar Amount	%
San Joaquin fall run Chinook Salmon	$12,741,975	21%
Late fall run Chinook Salmon	$4,382,579	7%
Winter run Chinook Salmon	$4,404,892	7%
Spring run Chinook Salmon	$5,566,375	9%
Steelhead	$5,682,773	9%
Splittail	$6,178,543	10%
Delta smelt	$3,231,154	5%
Longfin smelt	$2,527,579	4%
Green sturgeon	$1,581,891	3%
Migratory birds	$13,480,813	22%
Striped bass	$874,925	1%
Total by species	***$60,653,499***	100%

F. Geographic Areas

One of the guiding principles of the Integration Panel was to "attempt to provide funding for all major geographic areas in the eligibility area", while at the same time addressing the priorities in the RFP. As shown in Table F, funding was recommended, at varying levels, for each of the major geographic areas. The majority of recommended funding (85%)for proposals falls within three large geographic areas: the Sacramento River mainstem and tributaries ($20 million, 33%), San Joaquin mainstem and tributaries ($20 million, 33%), and Delta ($12 million, 19%).

Table F. Summary of Proposals Recommended for Funding

Geographical Area	Dollar Amount	%
Sacramento Mainstem	$17,730,750	29%
Sacramento Tributaries	$2,602,684	4%
Delta	$11,619,697	19%
East Side Tributaries	$5,739,300	9%
Suisun Marsh and Bay	$481,000	1%
North Bay	$751,500	1%
San Joaquin Mainstem	$12,941,378	21%
San Joaquin Tributaries	$7,312,409	12%
Landscape	$1,474,781	2%
Totals by Geographical Area	*$60,653,499*	100%

Delta. Proposals recommended for funding in the Delta include efforts directed at channel form changes, floodplain and marshplain changes, entrainment, water quality, undesirable species interactions, and population management/artificial propagation. The project types were primarily implementation projects, with lessor amounts of monitoring and research, and a small amount of planning.

Species and habitat types benefited include: all salmonid species, delta and longfin smelt, splittail, green sturgeon, striped bass, migratory birds, instream aquatic habitat, tidal freshwater and saline marsh, mid-channel islands and shoals, seasonal wetlands, perennial grasslands, and SRA habitat.

Table F-3. Funding Summary for Geographical Area: Delta

11 proposals and $11,619,697 recommended for funding

	FUNDED	
Stressor Groups	**Dollar Amount**	**%**
Entrainment	$27,000	0%
Floodplain/Marshplain changes	$4,582,005	39%
Channel Form Changes	$5,650,605	49%
Water Quality	$1,067,617	9%
Undesirable Species Interactions	$97,600	1%
Population Management/Artificial Propagation	$194,870	2%
Totals by stressor group	***$11,619,697***	100%

Project Type	**Dollar Amount**	**%**
Implementation	$9,298,200	80%
Planning	$27,000	0%
Monitoring	$1,217,627	10%
Research	$1,076,870	9%
Totals by Project Type	***$11,619,697***	100%

ATTACHMENT A

1997 Category III Integration Panel

Name	Organization	Expertise
Serg Birk	CVP Water Association	Fisheries, Sac River watershed
Randy Brown	Department of Water Resources	Fisheries, water quality
Jerry Bruns	Central Valley Regional Water Quality Control Board	Water quality, watershed, fisheries
Dan Castleberry	US Fish and Wildlife Service	CVPIA/AFRP, fisheries
Jim Frazier	US Forest Service	Hydrologist, upper watershed
Rod Fujita	Environmental Defense Fund	Fisheries, ecosystem
Bruce Herbold	US EPA	Fisheries, delta emphasis
Perry Herrgesell	Department of Fish and Game	Fisheries
Elise Holland	The Bay Institute	Fisheries, Delta emphasis
Diana Jacobs	State Lands Commission	Ecologist, river physical processes
Roy Leidy	EIP Associates	Fisheries and forestry resources, watershed tributary
Jim McKevitt	US Fish and Wildlife Service	CVPIA, wildlife biology
Frank Michny	USBR	Wildlife biology, CVPIA
Terry Mills	CALFED	Fisheries, ecosystem processes
Dave Paullin	US Fish and Wildlife Service	Migratory birds, wetlands
Tim Ramirez	Tuolumne River Preservation Trust	Hydrologist, San Joaquin watershed
Dudley Reiser	R2 Resource Consultants	Aquatic/ fisheries, PacNW exposure
Pete Rhoads	MWDSC	Aquatic/ fisheries, ecosystem
Tom Taylor	Entrix	Aquatic habitats/ fisheries, broad emphasis
Dave Vogel	NRS Inc.	Aquatic/ fisheries, Sac River and SJ Watershed emphasis